SHEET <u>1</u> OF <u>13</u>

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

ATTY. DOCKET NO. 061282-0234

SERIAL NO. 10/574,863

APPLICANT

Yuichiro SASAKI, et al.

(Substitute for form 1449/PTO)

FILING DATE April 06, 2006 **GROUP** 2823

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			U	J.S. PATEN	Γ DOCUMENTS				-
EXAMINER'S INITIALS	CITE NO.	CITE NO. Document Number Number-Kind Code2 (if known) US 5,561,072 US 6,465,727 B2 US 6,653,699 US 2005/0227463 US 6,713,819 B1 Foreign Patent Document Country Codes -Number 4 - Kind Codes (if known) JP 9-199719 JP 5-206045 JP 58-97863 WO 98/34268 JP 6-310533 OTHER ART (In CITE NO. Include name of the author (in CAPI journal, serial, symposium, catalog, opublished. International Search Report Computed to the published of the published of the computed to the published. Y. Kiyota, "Surface Reaction Y. Kiyota, et al., "Role of hyd spectroscopy and Fourier-transfer of the computed to the published of the computed to the published of the computed to the comp	Publication Date MM-DD-YYYY	Name of Patentee or Applicant Document	Document Rejeva		Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
	 	us	5,561,072	10-01-1996	SAITO				 .
· · · · · · · · · · · · · · · · · · ·		US	6,465,727 B2	10-15-2002	MARUYAMA et al.				
		US	6,653,699	11-2003	YANG, JEONG-HWAN				
		US		10-2005	ITO et al.	-			
		US	6,713,819 B1	03/30/2004	En et al.				
			· · · · · · · · · · · · · · · · · · ·		TENT DOCUMENTS				
EXAMINER'S INITIALS		1	ntry Codes -Number 4 -Kind	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Co Lines W Relevant Appe	Vhere Figures	Tr Yes	anslation No
			JP 9-199719	07-31-1997	TOSHIBA CORP		·		
			JP 5-206045	08-13-1993	HITACHI LTD				
			JP 58-97863	06-10-1983	TOSHIBA CORP		İ		
			WO 98/34268	08-06-1998	ULTRATECH STEPPER INC				
			JP 6-310533	11-04-1994	FUJITSU LTD				
			OTHER A	RT (Including Autho	r, Title, Date, Pertinent Pages, Etc.)				
EXAMINER'S INITIALS		journ	al, serial, symposium, cat		 i), title of the article (when appropriating) je(s), volume-issue number(s), publising 				е,
		Inte	rnational Search Rep	ort correspondi	ng to application no. PCT/JP20	04/00147	3 dated A	pril 13, 2	004
***					ced performances of sub-0.1 µ m on VLSI Technology Digest 110-1111, 2000.				
		Y. K	liyota, "Surface Reac	tion Doping usin A	ng Gas Source for Ultra Shallo pplied Physics, 2000.	w Junctio	ns", Japa	an Society	of
		Y. k spe	Kiyota, et al., "Role of ectroscopy and Fouri	er-transform infr	g rapid vapor-phase doping ar ared-attenuated total reflection gy A 16 (1), pp. 1-5, Jan/Feb 19	າ", Journa	x-ray ph Il of Vacu	notoelecti Jum Scier	on nce
				Technolog	g using Gas Source for Ultra S gy No. 39, pp. 9-11, June 2002.		·		
)			Room Temperature", Extende unction Technology, pp. 39-40,	2002.			
			Sasaki et al., "B₂H₅ Pl	Technology Dig	est of Technical Papers, pp. 18	0-181.	•		
			Sasaki et al., "B₂H₅ Pl	Technology Dig	th "In-situ He Pre-amorphizations of Technical Papers, pp. 18 ponding Chinese Patent Application March 30, 2007.	0-181.	•		

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			N DISCLOSI BY APPLICA		ATTY. DOCKET NO 061282-0234		1	IAL NO 574,8			
					APPLICANT Yuichiro SASA	AKI, et	al.				
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			U	.S. PATEN	T DOCUMENTS						
EXAMINER'S INITIALS	CITE NO.	Nu	Document Number mber-Kind Code2 (il known)	Publication Da MM-DD-YYY)			ited		s, Columns, ant Passage Figures A	es or Re	
		ÜS	2006/0205192	09/2006	Walther et	al.					
		US	5,969,398	10/1999	Murakam						
		US	6,051,482	04/2000	Yang						
		US	5,897,346	04/1999	Yamaguchi e	t al.					
		US									
		US									
		US									
		US					-				
		US									
		US									
		US									
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				FOREIGN P.	ATENT DOCUMENTS						
EXAMINER'S			reign Patent Document	Publication Date				ns, Lines	Tr	anslatio	n
INITIALS	CITE NO.	Cou	intry Codes -Number 4 -Kind Codes (if known)	MM-DD-YYYY			ere Rele ures Ap		Yes		No
			JP 9-17867	01/17/1997	NKK Corp.						<u> </u>
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						+				 	-
	L		OTHER A	L RT (Including Autl	nor, Title, Date, Pertinent Pages	Etc.)			L	Ц	
EXAMINER'S INITIALS	CITE NO.	journ	de name of the author (in	CAPITAL LETTER	RS), title of the article (when app age(s), volume-issue number(s)	ropriate), tit				e,	
				US Pate	nt Application Serial No. 11/153	,572				$\neg \uparrow$	
				US Pate	nt Application Serial No. 11/819	,567					
		ΙT			tage Roll-off by Ultra-shallow Ju on VLSI Technology Digest of Te			lash Lam	p Annealing	",	
		EX	AMINER			DATE C	ONSIDE	ERED			

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				APPLICANT Yuichiro SASAKI, e	t al.		
	(Sub:	estitute for form 1449/PTO)		FILING DATE April 6, 2006	GR0 28		
			U.S. PATEN	T DOCUMENTS		•	
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code2 (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Document	Cited	Pages, Columns, Lines, Whe Relevant Passages or Relev Figures Appear	
	<u></u>	US					
				or, Title, Date, Pertinent Pages, Etc.)			
EXAMINER'S INITIALS	CITE NO.			6), title of the article (when appropriate), ge(s), volume-issue number(s), publishe			
	 	YAMASHITA, F., et al., "	Direct Joule Heating	of Nd-Fe-B Based Melt-Spun Powder	and Zin	c Binder", 1999, IEEE.	
. —		CHU, P.K., et al., "Par		a Doping: Progress and potential", SC 99, pages 55-60, www.solid-state.com		ATE TECHNOLOGY,	
<u>-</u>		CHU, P.K., et al., "Part two	of two, Plasma Do 1999, pa	ping: Progress and potential", SOLID ges 77-82, www.solid-state.com.	STATE '	TECHNOLOGY, October	
		HORI, A., et al., "CMOS D		oward 50 nm Region – Performance a 999, pages 641-644, IEEE.	nd Drain	Architecture – ", IEDM,	
		KWOK, DIXON T.K., et al.,	"Energy distribution CHNOLOGY, 2001,	n and depth profile in BF₃ plasma dop pages 146-150, vol. 136, Elsevier Scie	ing", SU nce B.V.	RFACE AND COATINGS	
		YAMASHITA, F., et al., Compacting Press wit	"Nd-Fe-B Thin Arc-s h Ion-implanted Pun	shaped Bonded Magnets for Small DC ches", J. MGN. SOC. JAPAN, 2001, pa	Motors ages 683	Prepared by Powder -686, Vol. 25 No. 4-2.	
				Rotor Composed of a Highly Dense F MAGN. SOC. JAPAN., 2002, pages 11			
			Ultima	-50NM CMOS – The role of Plasma Dite Junction Technologies Inc.		, ,	
		SASAKI, Y., et al., " B₂H₀ I	lasma Doping with DIGEST OF TECHN	In-situ He Pre-amorphization"", SYMI IICAL PAPERS, 2004, pages 180-181,	POSIUM IEEE.	ON VLSI TECHNOLOGY	
			2004,	unction Formation", MATSUSHITA TE pages 404-409, Vol. 50 No. 6.		·	
		TSUTSUI, K., et al., "Dopin Process in Plasma Dopin	ng Effects from Neut ng", THE JAPAN SO	ral B₂H6 Gas Phase on Plasma Pretre CIETY OF APPLIED PHYSICS, 2005, p	ated Si S ages 390	Substrates as a Possible 03-0907, Vol. 44 No. 6A.	
				f highly-Excited Self-Trapped Exciton OCIETY OF JAPAN, June 1983, pages			
		Formation", JOURNAL O	F THE PHYSICAL S	Motion of Self-Trapped Excitons in Rb OCIETY OF JAPAN, September 1986,	pages 3	258-3271, Vol. 55 No. 9.	
				Oxygen Removal from Silicon-Overla ductor Research Center, Matsushita E			
		FUJITA, T., et al., "Electro JOURN	on Paramagnetic Res AL OF APPLIED PH	sonance Studies of Defects in Oxyge /SICS, July 1987, pages L1116-L1118	n-Implan Vol. 26	ted Silicon", JAANESE No. 7.	
		EXAMINER		DATE	CONSID	ERED	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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			U	.S. PATEN	T DOCUMENTS	5			
EXAMINER'S INITIALS	CITE NO.	1	Document Number nber-Kind Code2 (if known)	Publication Dat MM-DD-YYYY			ted	Pages, Columns, Lines Relevant Passages or I Figures Appear	Relevant
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			OTHER A	RT (Including Auth	or, Title, Date, Pertinent Pag	ges, Etc.)			
EXAMINER'S INITIALS	CITE NO.	Includ journa publis	al, serial, symposium, cata	CAPITAL LETTER alog, etc.), date, pa	S), title of the article (when a age(s), volume-issue numbe	appropriate), title r(s), publisher, c	e of the i	item (book, magazine, or country where	
		MI			ygen from Si layer on burr ember 1987, pages 2566-2			ion of hydrogen", J.	
		res	MIZUNO, B., et al., "New sonance plasma", APPL	doping method . PHYS. LETT., N	or subhalf micron trench s ovember 1988, pages 2059 Physics.	sidewalls by us 1-2061, Vol. 53 i	sing an o	electron cyclotron American Institute of	
					Secondary Defects in MeV ERENCE ON SOLID STAT pages 177-180.				
		ног			Shallow Source/Drain Jun al Annealing", 1994, pages			KeV Ion Implantation	
		HO Co	oncept of Sub-0.1 µm M(DS Devices- ", TE	stics of a Room Temeprate CHNICAL REPORT OF IEIG RMATION AND COMMUNIC	CE, 1995, page	s 41-46,	ossibility and Design , THE INSTITUTE OF	
		MIZ	UNO, B., et al. " Plasma	doping for silico	n", SURFACE AND COATII 85, Elsevier Science S.A.	NGS TECHNOL	.OGY, 1	996, pages 51-55, Vol.	
					for Fabricating the Surface EST OF TECHNICAL DIGE				
					for a high concentration p METHODS IN PHYSICS F Elsevier Science B.V.				
		TAK			tation Induced Oxide Char ., March 1997, pages 1618				
					5-170, Central Research L Ltd.	-			
		m	ethod", EEP-Vol. 19-1, A	DVANCES IN EL	gn Of At-Cut Quartz Reson ECTRONIC PACKAGING, 1	1997, pages 110	01-1108,	, Vol. 1, ASME 1997.	
			199	7, pages 345-950	ma-Less Doping of Semic , Vol. 438, MATERIALS RE	SEARCH SOCI	ETY.		
			Junction - L	SI Yield and surf	Plasma Doping – for Next (ace contamination issues - ensions for pMOSFETs wi	·", 1997, pabes	B9-B12	, IEEE	
			Fa	bricated by Plasr	ensions for pMOSFETS wi na Doping", IEDM, 1997, pa roscopy (HX-PES) study o	ages 475-478, I	EEE		
		<u> </u>	plasma-doped silicon	layer for the app	lication of advanced ULSI	devices", 2006	5, pages	116-119, IEEE.	
		EXA	MINER			DATE CO	NSIDEF	RED	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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		TION DISCL		ATTY. DOCKET NO. 061282-0234	I	RIAL NO. rial No. 10/574,8	163
				APPLICANT Yuichiro SASAKI,	et al.		
	(Sub	stitute for form 1449/P	ТО)	FILING DATE April 6, 2006	GR(282		
			U.S. PATEN	T DOCUMENTS			
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code2 @	1411 00 1000		of Cited	Pages, Columns, Lines Relevant Passages or F Figures Appear	Relevant
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			<u> </u>	nor, Title, Date, Pertinent Pages, Etc.)			
EXAMINER'S INITIALS	CITE NO.			RS), title of the article (when appropriate age(s), volume-issue number(s), publis			
			E International Confere	Subsequent Rapid Thermal Processince on Advanced Thermal Processin IEEE	ng of Semi		
				"Plasma Doping", 2004, pages 423-4			
		J	unction Technology, 20	oom Temperature", Extended Abstra 02, pages 39-40, Japan Society of Ap	plied Phys	sics.	
				a Doping System", Extended Abstrac 02, pages 37-38, Japan Society of Ap			
		JIN, C.G., et al., "	Estimation of Ultra-Sha Spectroscopic Ell	llow Plasma Doping (PD) Layer's Op ipsometry (SE)", 2004, Pages 102-10	tical Abso 3, IEEE.	rption Properties by	
				tion by Multiple MeV Boron Ion Impla n solid State Devices and Materials,			
		SASAKI, Y., et al., "N	ew method of Plasma d Methods in Physics Ro	oping with in-situ Helium pre-amorpl esearch B 237, 2005, pages 41-45, EL	nization", N SEVIER B.	Nuclear Instruments and V.	
		JIN, C.G., "Ultra shalle (ASLA) with selective	absorption modulation	on by plasma doping (PD) and long p ", Nuclear Instruments and Methods ages 58-61, ELSEVIER B.V.	pulse all so in Physic	olid-state laser annealing s Research B 237, 2005,	
			and Solid Plasma Sourc	ma-Less Doping for SI: Application e Application for Safety Operation", shita Electric Industrial Co., Ltd.			
		Engineering	Research Center for Pl	urce Implantation Method for Ultra-S asma-Aided Manufacturing, Universi	ty of Wisc	onsin-Madison.	
				-Wall of a Sub-0.5 µm Width Trench" Devices and Materials, Tokyo, 1987,			
				hnology", Applied Physics, 2001, pa	<u> </u>		
		Fabricated by Plasm	a Doping", TECHNICAL	tensions for pMOSFETs with High Ad REPORT OF IEICE, 1998, The Institu Communication Engineers.	te of Elect	ronics, Information and	
				lasma Doping", Special Issue – Curro Technology-1.			
		MIZUNO, B., et al.,		antation – Plasma Doping", High Ter 6, pages 114-120, Vol. 3 No. 22.	mperature	Science Journal, May	
		EXAMINER		DAT	E CONSID	ERED	

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		TION DISCLOS		ATTY. DOCKET NO. 061282-0234		RIAL NO. rial No. 10/574,8	363
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	(Sub:	stitute for form 1449/PTO)		FILING DATE April 6, 2006	GR0 282		
		U	.S. PATEN	T DOCUMENTS			
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code2 ((I known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Document	Cited	Pages, Columns, Lines Relevant Passages or F Figures Appear	Relevant
v		US		*************************************			
		OTHER A	RT (Including Autho	or, Title, Date, Pertinent Pages, Etc.)		•	
EXAMINER'S INITIALS	CITE NO.			s), title of the article (when appropriate), ge(s), volume-issue number(s), publisher			
			Silicon Systems F	n Technology using Fluorinated Amo Research Laboratories, NEC Corporati	on.		
		MIZUNO. B., et al., "Plasma	doping for fabricat	ting ultra shallow junction, 3p-ZX-4, M Ltd.	atsushit	ta Electric Industrial Co.,	
		ODA, H., et al., "Demand fo Series – Lecture N	or Junction Techno lanuscripts, Comp	ology in CMOS Transistors", 27a-ZL-1 rehensive Lectures within the Area, 2	, 49th A _l 2002, To	pplied Physics Lecture kai University.	
		MIZUNO, B., et al., "Junct	ion Technologies:	Status Quo and Perspectives", 27a-Z within the Area.	L-2, Con	nprehensive Lectures	
		HATA, N., et al., "Characte Suppression", 26p-M-19,	erization of Low-k 63rd Applied Phys	Dielectrics by Z-ray Scattering- Aniso ics Lecture Series – Lecture Manuscr	tropy in ipts, 200	Pore Diameter and its)2, Niigaka University.	
		SHIMANUKI, J., et al., "Beha	vior of pores in a t	hin low-k film during anneal – Ex-situ M-20.	TEM ob	servation method", 26p-	
		SASAKI, Y., et	al., "In-situ Beam	Current Monitor for Ion Implanter", 25	5a-G-1, p	pages 768.	
			- Lecture Ma	n Assisted Gas Doping", 25a-G-2, 63rd Inuscripts, 2002, Niigaka University.			
	•			-Pt type liquid metal lon source for fo pplied Physics Lecture Series – Lectu University.			
		IMAMURA, K., et al., "I implantation", 25a-G-4, 6	Development of ke 3rd Applied Physi	y-techniques for co-doping of acceptors cs Lecture Series – Lecture Manuscri	or and d pts, 200	onor by single ion 2, Niigaka University.	
		YAMASHITA, K., et al., "Deve Lec	lopment of Flash i ture Series – Lectu	Lamp Annealer for 300mm Wafers", 29 ure Manuscripts, 2003, Shinagawa Uni	p-ZW-1 versity.	0, 50th Applied Physiscs	
		KUBO, Y., et al., "Developme		gle ion implantor", 29p-ZW-11, 50th Ap scripts, 2003, Shinagawa University.	oplied P	hysiscs Lecture Series –	
				e Doping at Room Temperature" 29p- ure Manuscripts, 2003, Shinagawa Uni			,
				nanism of Gas Phase Doping at Room es – Lecture Manuscripts, 2003, Shina			··
		SASAKI, Y., et al., "Behavio Physiscs	r of H and contami Lecture Series –	ination in the Plasma Doping (PD) pro Lecture Manuscripts, 2003, Shinagaw	cess", 2 a Univer	9p-ZW-14, 50th Applied rsity.	
				on Formation by Heat-assisted Excime eries – Lecture Manuscripts, 2003, Shi			
		EXAMINER		DATE (CONSIDI	ERED	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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		U	.S. PATEN	T DOCUMENTS			
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code2 (If known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of C Document	Cited	Pages, Columns, Lines Relevant Passages or I Figures Appear	Relevant
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		OTHER A	RT (Including Autho	or, Title, Date, Pertinent Pages, Etc.)		 	
EXAMINER'S INITIALS	CITE NO.			s), title of the article (when appropriate), tige(s), volume-issue number(s), publisher			
		Coincidence Doppler Broa Vacancy-Oxygen Comple	adening Method, P exes in Si", 1a-A-8,	d Oxygen Compound Deficits in Si Due Positron Annihilation Coincidence Dop 64th Applied Physics Lecture Series - Fukuoka University.	pler Bro - Lectur	oadening Methods for re Manuscripts, 2003,	
			ced by noble gas i	eficits in Noble Gas Ion Implanted Si U implanted Si", 1a-A-9, 64th Applied Ph ripts, 2003, Fukuoka University.			
		Preprocessing, Effects of s	ubstrate surface c	trate Surface conditions with Gas Dop condition on gas-phase doping using p eries – Lecture Manuscripts, 2003, Ful	olasma (pretreatment", 1a-A-10,	
		ITOH, H., et al., "Ultra-low		tation in Si II", 30p-ZQ-9, Preprints of t d Physics, 2006, Ritsumeikan Universi		Meeting of the Japan	, , , , ,
		Boron", 30p-ZQ-10, Prepi	rints of the 67th Mo	nges in Chemical Bondings and Their eeting of the Japan Society of Applied University.	Physic	s, 2006, Ritsumeikan	
		TANAKA, Y., et al., "8nm (5 30p-ZQ-11, Preprints of the	E18cm ⁻²) Ultra Sha e 67th Meeting of t	illow Junction Formation by Double-Pi he Japan Society of Applied Physics,	ulsed G 2006, R	reen Laser Annealing", itsumeikan University.	
			rints of the 54th Me	stic Substrate by Atomic Hydrogen An eeting of the Japan Society of Applied Aoyama Gakuin University.			
		29p-SM-2, Preprints of th	e 54th Meeting of t	on Chemical Activity of Defects in Poly the Japan Society of Applied Physics byama Gakuin University.	and Rel	ated Societies, 2007,	
		WATANABE, M., et al., "Stu Doping Method", 29p-SM-	3, Preprints of the	oron Depth Profiles and Ultra-Shallow 54th Meeting of the Japan Society of 2007, Aoyama Gakuin University.	P+ Lay Applied	ers Formed by Plasma I Physics and Related	
		ISHIBA, T., et al., "Lattice Str	rains in High Energ	gy Ion Implated Silicon Subjected to Ti	hermal .	Annealings", 27a-SN-13.	
				t Reduction of Multiple MeV Ion Impla	`		
		· · · · · · · · · · · · · · · · · · ·	Heavy-lo	ation and Amorphization Mechanism on Beam Irradiation", 27a-SN-15.			
				re-oxidation Cleaning on Grotwh of O			
				ning methods on Dielectric Breakdown		•	
		TAKIYAMA, M., et al.	, " Electrical Chara	acteristics of AI MOS Diode Contamina	ated wit	h Cu-l", 28a-D-3.	
		EXAMINER		DATE C	ONSID	ERED	

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		U	.S. PATEN	T DOCUMENTS		
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code2 (It known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant o Document	f Cited	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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			•	ct Reduction of Multiple MeV Ion Im		
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			_ **	I Annealing for High-energy Ion Imp		` '
	ļ			rphization by si Double Ion Implanta		
	ļ			eal Effect by Photoacoustic Displace		
		SHIMIZU, N., et al., "Effects	or Junction Leaka	ge Current Reduction of Additional 9p-C-14.	nign Enei	rgy Si ion implantation",
		KATSUMOTO, M., et al., "Ti	e Effect of NH40h	I/H202 Cleaning on C-V Characterist	cs of MO	S Capacitor", 11p-B-12.
		SHINNO, H., "Ellipsome	tric Measurement	s of Silicon Surfaces During Oxidati	on in R.F.	Plasma", 11p-B-13.
		•		ct of H2SO4 Boiling on Silicon Surfa		
				a-assisted impurity Doping for ULSI		
		1	•	Matrial Processing Induced by Electr		
		Institute of Electronics, i	nformation and C	nent System for VLSI Manufacturing ommunications Engineers, Matsush	ita Electri	ic Industrial Co., Ltd.
				Annealing of Ar* Implanted Damage*		
		1	<u> </u>	rties of High Energy Boron-implante	<u>.</u>	
		SHIMIZU, N., et al., "El		Formation on Junction Leakage Cur Implantation", 30p-ZK-4.	rent Usin	g nigri Energy Ion
		EXAMINER		DATE	CONSID	ERED

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				APPLICANT Yuichiro SASAKI, et	al.		
	(Sub:	stitute for form 1449/PTO)		FILING DATE April 6, 2006	GR0 282		
		Į	J.S. PATENT	Γ DOCUMENTS			
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code2 (If known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of O Document	Cited	Pages, Columns, Lines, Relevant Passages or R Figures Appear	
		US					
	·			r, Title, Date, Pertinent Pages, Etc.)			
EXAMINER'S INITIALS	CITE NO.			i), title of the article (when appropriate), t pe(s), volume-issue number(s), publisher			
		KINOSHITA, K., et al.,	"Optical Property C	hange of Silicon in Low Energy Ion In	nplantat	tion (II)", 28a-ZW-8.	
			<u> </u>	ct During the Ion Implantation with Lo			
				arging During Ion Implantation on Dev		1	
		MURAKOSHI, A., et al., " Fo		allow Diffusion Layer by Ultra Low En 10.		n Implantation", 26p-ZN-	
				l., "Plasma Doping Method", 26p-ZN-1			
	ļ			tra Shallow Junction by Spin-on Glass			
				is Ion Bombardment Damage of Si Sui Th concentration Profile for Low Energ		• •	······································
		J		eously Implanted As+ ions on diffusivi	•	• •	
			atoms in	planted into silicon", 26p-ZP-8.	_		
		AKIYAMA, H., et al., "The li	fe-time control tech	nique for power devices using high-en P-6.	nergy h	eavy ion radiation", 28a-	
		1		legion of Ion Implantation Induced Ph			
				he minority carrier lifetime for the Si e		• •	
	ļ	1		emperature Vapor Phase Doping (RTV			
				oping Applicable to sub-1/4 micron Pf			
		AUJIKAI, n., et al., "Ultra-s	mailow, low resistal	nce junction formation by solid-phase 28p-P-6.	amusic	on or boron from BSG",	
		EXAMINER		DATE C	ONSID	ERED	

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	(Sub:	stitute for form 1449/PTO)		FILING DATE April 6, 2006	GR0 28	OUP 23	
		U	S. PATEN	Γ DOCUMENTS			
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code2 (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant o Document	Cited	Pages, Columns, Lines Relevant Passages or I Figures Appear	Relevant
		US .					
				or, Title, Date, Pertinent Pages, Etc.)		1818 1818 111	
EXAMINER'S INITIALS	CITE NO.			s), title of the article (when appropriate) ge(s), volume-issue number(s), published			
				ol by Plasma Emission in Plasma Do	-		
				shallow Junctions by Sb Selective δ			
				during Rapid Vapor-phase Doping A	-	•	
		L		Resistance and Shallow Source/Dra Process", 29a-G-2.			
				, Formation by Polyatomic Cluster Id			
				f shallow junctions by low-energy in			
				n Formation by Decaborane Ion Imp		• •	
	<u> </u>	1		Formation by 0.2 keV-single B Ion Ir Ilow Source/Drain Junction Fabricat			
				the Herzog correction revisited", 7	•	sina Doping , Ja-PC-15.	
	 			t measuring device using a SQUID fo		ensity beams", 7a-YP-9.	
			gh resolution mea	surement of HeH ⁺ dissociative reconectron cooler", 7a-YP-10.		•	
	<u> </u>	TSURUBUCHI, S., et al., "Exc	itation cross sect	ions for the resonance states of the	Ne by ele	ctron impact", 7a-YP-11.	
				n speed and low electric power techr cations has arrived", IEDM Conferen			
				on Analysis System", The Institute of (IEICE) Electronics Society Annual I			
		EXAMINER		DATE	CONSID	ERED	-

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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		U	S. PATEN	T DOCUMENTS		
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code2 (1 known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of o	Cited Pages, Columns, Line Relevant Passages or Figures Appe	Relevant
		OTHER A	RT (Including Author	or, Title, Date, Pertinent Pages, Etc.)		
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in journal, serial, symposium, cata published.	CAPITAL LETTER: alog, etc.), date, pa	S), title of the article (when appropriate), ge(s), volume-issue number(s), publisher	title of the item (book, magazine, r, city and/or country where	
				om P-doped Polysilicon through Ultrat ZP-11.		
		<u> </u>		con Dioxide in the Presence of Hydrog	<u> </u>	
		TAKASE, M., et al., "Eff		ness on boron profile in the plasma do		
	<u> </u>			I., "Plasma Doping", Invitational Lectu		
			Applie	ology for the MOS transistor with a character of Physics, 1999, Vol. 68 No. 5.		
				ve Beam Current Monitor Using DC SC	.,,	
			of the Japan Soc	lasma Doping for Beam-Channel Trans lety of Applied Physics and Related So University of Technology.		
		SATO, T., et al., "Effect of we the 51st Spring meeting	of the Japan Soc	ent on dose of Impurity after plasma d iety of Applied Physics and Related So Iniversity of Technology.	loping", 29p-ZG-14, Preprints of ocieties, March 2004, Tokyo	
			of the Japan Soc	plasma treatment in plasma doping m iety of Applied Physics and Related So Jniversity of Technology.		
				phization for Shallow Junction Forma ed Physics and Related Societies, Sep University.		
		NAKAZAWA, H., et al., "Ch Preprints of the 65th Mee	ting of the Japan	Boron/Phosphorus Layer by Cold/Hea Society of Applied Physics and Relate ohoku Gakuin University.	t Ion Implantation", 3p-P10-15, d Societies, September 2004,	
				lation for Three-Dimensional Transisto ed Physics and Related Societies, Sep University.		
				file of Helium Plasma Treatment on a F osium Collection of Lectures, Septemb Department.		
		PerPreprints of the 66	oth Meeting of the	Mesa-type p+/n, Junctions Formed by Japan Society of Applied Physics, 200	5, Tokushima University.	
		PerPreprints of the 66	6th Meeting of the	s of ultra-Shallow p+ Layers Formed b Japan Society of Applied Physics, 200	5, Tokushima University.	
				n Atoms Implanted in A Silicon Surfac Japan Society of Applied Physics, 200		
		EXAMINER		DATE (CONSIDERED	

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		U	.S. PATEN	T DOCUMENTS	<u> </u>		_
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	,		` .	r, Title, Date, Pertinent Pages, Etc.)			
EXAMINER'S INITIALS	CITE NO.	journal, serial, symposium, cata published.	alog, etc.), date, pag	 s), title of the article (when appropriate), tige(s), volume-issue number(s), publisher, 	city and	l/or country where	
		169, Basic Research	h Lab., Semicondu	ct in Si layer on buried oxide by implan ctor Research Center, Matsushita Elec	tric ind	ustrial Co., Ltd.	
			Research Lab.,	SDM 88-95, Semiconductor Research C Matsushita Electric industrial Co., Ltd.			
				ssma Doping", Electronic Material, Dec			
				miconductor Research Center, Matsus		•	
			of Electronic	anroom Auto Control System", 1994 S c information and Communications.			
			<u> </u>	ns Near the Surface - Outer Diffusion a			
			Silicon Nitride Filn	Oxidation of Nitrogen Introduced by lons on Boron Enhanced Diffusion and C			
		MIZUNO, B., et al., "Behavio		Implantation", 28p-ZL3. mplanted lons (cont'd) Self-sputtering 11.	and Ba	ck-scattering", 20p-ZE-	.,,
		KINOSHITA K., et al., "Optic	al Changes in Ass	ociation with Crystalline Damage due t (IV)", 20p-ZE-12.	o Low I	Energy Ion Implantation	
	<u>!</u>	HASEGAW	/A, K., et al., "Dual	Species (B, As) Implantation in Silicon	ı", 28p-	ZE-13.	
		SATO, T., et al., "Dose Volur HF treatment before and afte	er plasma doping"	F Cleansing Before and After Plasma E , 1a-A-11, 64th Applied Physics Lectur 003, Fukuoka University.	oping (e Series	Change dose caused by s- s- Lecture Manuscripts,	
				tation in Polycrystalline Si, High tilt an lied Physics Lecture Series- Lecture M University.			
			y the stress of sha	Leak Current Caused by Element Isola allow trench isolation", 1p-A-2, 64th Ap uscripts, 2003, Fukuoka University.			
				eaning Process after Plasma Doping", on of Lectures, September 2004, Tohol			
				of ultra Shallow p⁺n Junctions formed to posium Collection of Lectures, Septen Department.			
				cale Silicon Substrate by using hybrid ociety of Applied Physics Symposium Saltama University.			
		52nd Japan Society	of Applied Physics	norphous layer formation process by H Symposium Collection of Lectures, 20	005, Sai	tama University.	
				ates with Resist Patterns", 1a-YE-9, 52 Dilection of Lectures, 2005, Saltama Un			
		EXAMINER		DATE C	ONSIDE	ERED	

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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					
		OKASHITE, K., et al., "Ultra Shallow Junction Formation with Plasma Doping and Spike RTA", 1a-YE-10, 52nd Japan Society of Applied Physics Symposium Collection of Lectures, 2005, Saitama University.					
		SAUDDIN, H., "Leakage Current Characteristics of Ultra-shallow p+/n Junctions Formed by Plasma Doping", 1a-YE- 11, 52nd Japan Society of Applied Physics Symposium Collection of Lectures, 2005, Saitama University.					
		MATSUNO, A., et al., "One Dimensional Thermal Diffusion Simulation for the USJ formation by green laser anneal with absorption layer", 16-YE-1, 52nd Japan Society of Applied Physics Symposium Collection of Lectures, 2005, Saitama University.					
	MIZUNO, B., et al., "ECR Plasma Doping", Matsushita Electric Industrial Co., Ltd.						
	HIGAKI, R., et al., "Effects of gas phase absorption into Si substrates on plasma doping process".						
LENOBLE, D., et al., "Fabrication of 60-nm plasma doped CMOS transistors", 2002, IEEE. SEVERI, S., et al., "Diffusion-less junctions and super halo profiles for PMOS transistors formed by SPER and FUSI							
gate in 45nm physical gate length devices", 2004, IEEE.							
EXAMINER				DATE CONSIDERED			

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